

ABSTRACT OF THE DISCLOSURE

The invention is directed to a system and method for accurately determining the latency of a selected path within a computer network. First, a setup or signaling protocol is used to establish a bi-directional path state that is associated with a given traffic flow having predefined parameters at each intermediary node along the selected path. Once the path states are established, a source entity disposed at a first end of the selected path formulates and transmits a test message carrying a time record or time stamp to a receiver disposed at the opposite end of the selected path. The test message is configured in accordance with the predefined traffic flow parameters, but does not include any options.

10 By virtue of the previously established path states at each node, the message is forwarded along the selected path without incurring any route or option processing delays. Upon receipt of the test message at the receiver, it is returned back to the source, and again follows the selected path. By comparing the time at which the test message is returned with the time record contained within the message, an accurate determination of the la-

15 tency of the selected path may be determined.